REMARKS

This is a response under 37 CFR §1.116. The purpose of this response is to address the reference citations and arguments made by the Examiner in the last office action. Since this response is being filed within two months of the mailing date of the final rejection, the courtesy of an advisory action is respectfully requested. Claims 9 and 13-20 are in this application. Claims 1-8, 10-12, and 21 have been cancelled.

The Examiner rejected claims 9 and 13-20 under 35 U.S.C. §102(e) as being anticipated by Ker et al. (U.S. Patent No. 6,011,681). For the reasons set forth below, applicant respectfully traverses this rejection.

Independent claim 16 recites, in part,

> "A device formed in a semiconductor material of a first conductivity type . . .
>
> "a separation region of the semiconductor material located only between the first and second trigger regions, the separation region contacting the surface, the first trigger region, and the second trigger region; and
>
> "a device region that overlies and contacts the surface at a location where the separation region contacts the surface between the first and second trigger regions, the device region at the location being free of a gate, and not lying below a gate."

In rejecting the claims, the Examiner pointed to FIG. 11 of the Ker reference as teaching all of the limitations of claim 16. To aid in the discussion, applicant has inserted an annotated version of a part of FIG. 11 of Ker.

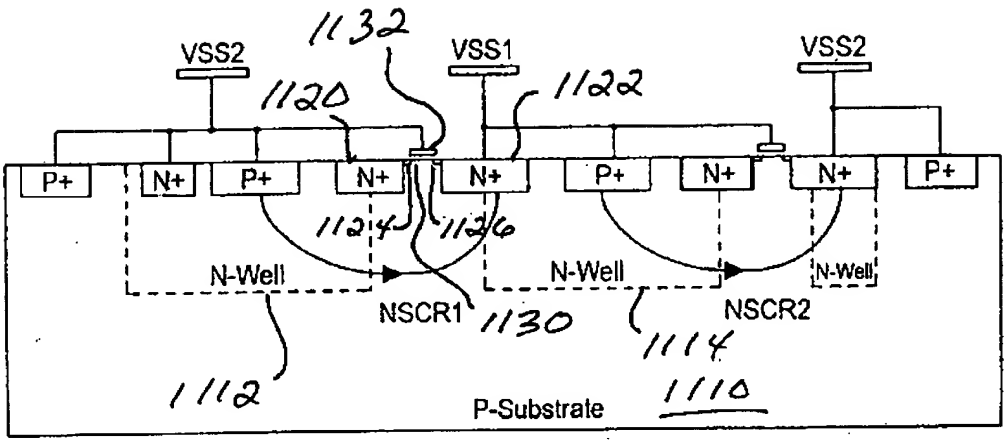

FIG. 11

As shown in annotated FIG. 11, the device includes a p-substrate 1110, and spaced-apart n-wells 1112 and 1114 that are formed in p-substrate 1110. Further, the device includes an n+ region 1120 that is formed in both p-substrate 1110 and n-well 1112, and an n+ region 1122 that is formed in both p-substrate 1110 and n-well 1114. In addition, the device appears to have NLDD regions 1124 and 1126 formed in p-substrate 1110 that contact the n+ regions 1120 and 1122. The device also has a gap region 1130 of p-substrate 1110, and a gate 1132.

In rejecting the claims, the Examiner appears to have pointed to n-well 1112 shown in the annotated version of FIG. 11 of Ker as constituting the first well of claim 16, and n-well 1114 as constituting the second well of claim 16. Further, the Examiner appears to have pointed to n+ region 1120 as constituting the first trigger region of claim 16, and n+ region 1122 as constituting the second trigger region of claim 16.

In addition, the Examiner appears to point to the NLDD regions 1124 and 1126 as well as gap region 1130 of p-substrate 1110 as constituting the separation region required by claim 16. The NLDD regions 1124 and 1126, however, have the wrong conductivity type and can not be read to be part of the separation region required by claim 16.

As noted above, the semiconductor material of claim 16 has the first conductivity type, and the separation region of claim 16 is a region of the semiconductor material. As a result, the separation region necessarily has the same conductivity type as the semiconductor material. Since the separation region must necessarily have the same conductivity type as the substrate, NLDD regions 1124 and 1126 can not be read to be part of a separation region that includes the p- gap region 1130.

Thus, since only the gap region 1130 of p-substrate 1110 can be read to be the separation region, the device shown in FIG. 11 of Ker fails to teach or suggest a device region as required by claim 16 because gate 1132 lies over the location where separation region (the gap region 1130 of p-substrate 1110) contacts the surface. In addition, claims 9 and 13-15 and 17-20 depend either directly or indirectly from claim 16 and are not anticipated by Ker for the same reasons as claim 16.

With further respect to claim 19, this claim recites:

> "no other region having the second conductivity type and a dopant concentration greater than the first well lies between the first trigger region and the second trigger region."

It is noted that NLDD regions 1124 and 1126 have the second conductivity type, and a dopant concentration that is greater than n-wells 1112 and 1114. As a result, NLDD regions 1124 and 1126 must be read to be part of the first and second trigger regions, respectively. If NLDD regions 1124 and 1126 are not read to be part of the first and second trigger regions, respectively, then the device shown in FIG. 11 of Ker fails to satisfy the "no other region" requirement of claim 19 due to NLDD regions 1124 and 1126. Thus, NLDD regions 1124 and 1126 can not be read to be part of the separation region.

Therefore, only the gap region 1130 of p-substrate 1110 can be read to be the separation region of claim 19. Thus, the device shown in FIG. 11 of Ker fails to

teach or suggest a device region as required by claim 16 because gate 1132 lies over the location where the separation region (the gap region 1130 of p-substrate 1110) contacts the surface. As a result, claim 19 is not anticipated by Ker for this additional reason as well.

Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are respectively requested.

Respectfully submitted,

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